Serial No.: 10/032,023
Group Art Unit: 2823

REMARKS

Examiner's Response to Amendment

It is respectfully submitted that the document previously filed was a Response and not an Amendment as indicated in the title of the first item of the Final Rejection of 12-15-03 (hereinafter the "Final Rejection"). No Amendment has been made to the above-identified Application *ab initio*.

The previous Response has been supplemented below to include an additional basis for unobviousness.

Claim Rejections - 35 USC §103

Claims 1-20 are rejected under 35 USC §103(a) as being unpatentable over applicant's admitted prior art of this application (hereinafter AAPA) in view of Lim et al. (U.S. Publication 2002/0171083, hereinafter "Lim").

AAPA discloses that an image sensor and method of manufacture therefor includes a substrate having pixel control circuitry. Dielectric layers on the substrate include interconnects in contact with the pixel control circuitry and with pixel electrodes. An intrinsic layer is over the pixel electrodes and has a gap provided between the pixel electrodes. An intrinsic-layer covering layer is over the intrinsic layer and a transparent contact layer over the intrinsic-layer covering and the interconnects. [FIG. 1 (PRIOR ART)]

Lim apparently discloses a thin film transistor array substrate and manufacturing method therefor having the large storage capacitance for use in a liquid crystal display device. The capacitor electrodes and the insulation layer are a dielectric layer so that the thickness of the dielectric layer becomes thinner and, therefore, much more electric charges can be stored in the storage capacitor. That means the liquid crystal display device can have a high picture quality and a high definition. Moreover, the present invention has a structure that can achieve the high manufacturing yield. [Lim Abstract]

In re claims 1, 6, 11, and 16, Applicants respectfully traverse the rejections since the Applicants' claimed combination, as exemplified in claim 1, includes the combination limitations not disclosed in the combination of AAPA or Lim of:

"providing a substrate;
forming control circuitry on the substrate;
forming dielectric layers on the substrate;
forming interconnects in the dielectric layers in contact with the control circuitry;
forming pixel electrodes in contact with the interconnects;
forming an intrinsic layer (i-layer) over the pixel electrodes;
forming a gap in the i-layer between the pixel electrodes;
forming an i-layer covering layer over the i-layer; and
forming a transparent contact layer over the i-layer covering layer and the interconnects."

The Examiner states the reason for combining the teaching of AAPA and Lim:

"...to enable the gap in the i-layer between the pixel electrodes of AAPA to be formed and furthermore to obtain a device which has the high picture quality and high definition (page 2, paragraph [0025])." [underlining for clarity]

It is respectfully submitted that AAPA taken as a whole teaches and suggests a pixel sensor or light detector while Lin taken as a whole teaches and suggests a liquid crystal display or light transmitter. The references, taken as a whole, perform diametrically opposing functions of sensing and transmitting light. Thus, each of the two references taken as a whole teach away from each other and, in *In re* Keller at 642 F.2d 425, the court stated with regard to 35 U.S.C. §103:

"...the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art."

It is also respectfully submitted that the combined teachings of a light sensor and a light transmitter would not have suggested the claimed invention.

In addition, the combination would provide a seemingly inoperative device due to their opposing functions and, in *In re* Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984), the CAFC stated:

"We have noted elsewhere, as a "useful general rule," that references that teach away cannot serve to create a prima facie case of obviousness... If references taken in combination would produce a "seemingly inoperative device, " we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facia case of obviousness."

It is further respectfully submitted there appears to be no teaching or suggestion for the combination in either reference since the reasons given by the Examiner of "enable the gap...to be formed" is not a reason for combining the teachings but a result. The Examiner's reason "to obtain a device which has the high picture quality and high resolution" appears to be directed to a display rather than a sensor. In *In re* Sang-Su Lee, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002), the CAFC held that the conclusion of obviousness may not be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion *in a particular reference*.

Finally, it is respectfully submitted that AAPA and Lin taken as wholes directly teach away from a combination with the other, and the combination of a light sensor and a light transmitter would provide an apparently inoperative device since the functions are directly contradictory. In *In re* Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984), the CAFC stated:

> "We have noted elsewhere, as a "useful general rule," that references that teach away cannot serve to create a prima facie case of obviousness... If references taken in combination would produce a "seemingly inoperative device", we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facia case of obviousness."

In re claims 3, 8, 13 and 18, these dependent claims respectively depend from independent claims 1, 6, 11, and 16, and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

In re claims 5, 10, 15 and 20, these dependent claims respectively depend from independent claims 1, 6, 11, and 16, and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

Based on the above, it is respectfully submitted that claims 1-20 are allowable under 35 USC §103(a) as being unobvious over AAPA in view of Lim.

Serial No.: 10/032,023
Group Art Unit: 2823

Applicants' Response to Examiner's Response to Applicants' Arguments

In the Final Rejection, the Examiner states:

> "Applicant's arguments filed 10/08/2003 have been fully considered but they are not persuasive.
>
> In response to Applicant's argument that the combined references neither teach or suggest the claimed invention, examiner respectfully disagree, it is argue that the Applicant's invention having an intrinsic layer (i-layer) over the pixel electrodes such that there is a gap in the i-layer between the pixel electrodes, however, since the present independent claims included the step of forming an i-layer covering layer over the i-layer, the claimed invention no longer has a gap. Therefore, it is noted that the feature upon which applicants relies (i.e., forming a gap in the i-layer between the pixel electrodes) is not existed in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). an intrinsic layer (i-layer) over the pixel electrodes having a gap provided therein between the pixel electrodes;
>
> For these reasons, examiner holds the rejection proper." [underlining for clarity]

It is respectfully submitted that the above appears to be a new basis of rejection and not a response to Applicants' Arguments to the Office Action of 7-8-03. As explained above, no Amendment has been made to the above-identified Application *ab initio*. Therefore, the present Final Rejection is improper under MPEP §706.07(a), second paragraph:

> "Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is...necessitated by applicant's amendment of the claims..." [underlining and deletion for clarity]

Paraphrasing the above, a second action will not be made final where the examiner introduces a new ground of rejection.

The above rejection appears to be of independent claims 1, 6, 11, and 16 under 35 USC §112, second paragraph, to the extent it is understood. The Examiner states specifically above:

> "Therefore, it is noted that the feature upon which applicants relies (i.e., forming a gap in the i-layer between the pixel electrodes) is not existed in the rejected claim(s)... an(sic) intrinsic layer (i-layer) over the pixel electrodes

having a gap provided therein between the pixel electrodes;" [deletion for clarity]

The element exists in rejected, unamended claims 1 and 6, which states:

"forming a gap in the i-layer between the pixel electrodes;"

The element exists in rejected, unamended claims 11 and 16, which states:

"an intrinsic layer (i-layer) over the pixel electrodes having a gap provided therein between the pixel electrodes;"

Therefore, the claimed invention comprises a combination, which includes forming a gap or having a gap provided between the pixel electrodes.

The Examiner includes a statement and citation, which do not appear relevant to the comments before and behind it:

"Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)."

However, it is respectfully submitted that the case law holds what is described in the specification is considered part of the claimed limitation where a defined term is involved.

In the recent case of All Dental Prodx, LLC v. Advantage Dental Prod., Inc. No. 02-1107 (Fed Cir. Oct. 25, 2002), the appeal centered on the claim term, "original unidentified mass," which the lower court concluded did not meet the requirements of the first and second paragraphs of 35 USC §112. The CAFC adopted the same claim construction of the lower court but held that the claim term was properly described in the specification and was definite and clear in the claim as a result.

It is respectfully submitted that a prima facie case has not been made either for obviousness or for failure to distinctly claim the subject matter. As stated by the CAFC:

"The Examiner bears the burden of establishing a prima facie case of obviousness." See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1471-1472, 223 USPQ 785, 787-788 (Fed. Cir. 1984).

Also, as stated by the Federal Circuit:

> "[t]he examiner cannot sit mum, leaving the applicant to shoot arrows in the dark hoping to somehow hit a secret objection harbored by the examiner. The prima facie case notion...seemingly was intended to leave no doubt among examiners that they must state clearly and specifically any objections (the prima facie case) to patentability and give the applicant fair opportunity to meet those objections with evidence and argument. To that extent the concept serves to level the playing field and reduces the likelihood of administrative arbitrariness." *In re* Oetiker, 977 F.2d 1443, 24 USPQ 2d 1443, 1447 (Fed. Cir. 1992)

Based on all of the above, it is respectfully submitted that claims 1-20 are unobvious under 35 USC §103(a) and distinctly claim the invention under 35 USC §112.

Conclusion

In view of the above, it is submitted that the claims are in condition for allowance and reconsideration of the rejections is respectfully requested. Allowance of claims 1-20 at an early date is solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including any extension of time fees, to Deposit Account No. 50-1078 and please credit any excess fees to such deposit account.

Respectfully submitted,

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